

AMERICAN NATIONAL STANDARD

Chapter 3. Building Blocks

305.6 Approach. One full unobstructed side of the clear floor or ground space shall adjoin or overlap an accessible route or adjoin another clear floor or ground space.

305.7 Maneuvering Clearance. If a clear floor or ground space is in an alcove or otherwise confined on all or part of three sides, additional maneuvering clearances complying with Sections 305.7.1 and 305.7.2 shall be provided.

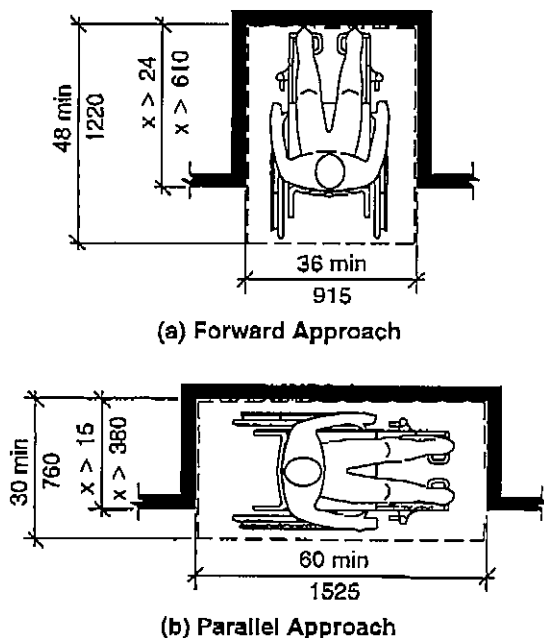


Fig. 305.7
Maneuvering Clearance in an Alcove

305.7.1 Forward Approach. The width of an alcove shall be 36 inches (915 mm) minimum where the depth exceeds 24 inches (610 mm).

305.7.2 Parallel Approach. The width of an alcove shall be 60 inches (1525 mm) minimum where the depth exceeds 15 inches (380 mm).

306 Knee and Toe Clearance

306.1 General. Where space beneath an element is included as part of clear floor or ground space at an element, clearance at an element, or a wheelchair turning space, the space shall comply with Section 306. Additional space beyond knee and toe clearance shall be permitted beneath elements.

306.2 Toe Clearance.

306.2.1 General. Space under an element between the floor or ground and 9 inches (230

mm) above the floor or ground shall be toe clearance and shall comply with Section 306.2.

306.2.2 Maximum Depth. Toe clearance shall be permitted to extend 25 inches (635 mm) maximum under an element.

306.2.3 Minimum Depth. Where toe clearance is required at an element as part of a clear floor or ground space, the toe clearance shall extend 17 inches (430 mm) minimum beneath the element.

306.2.4 Additional Clearance. Space extending greater than 6 inches (150 mm) beyond the available knee clearance at 9 inches (230 mm) above the floor or ground shall not be included in toe clearance.

306.2.5 Width. Toe clearance shall be 30 inches (760 mm) wide minimum.

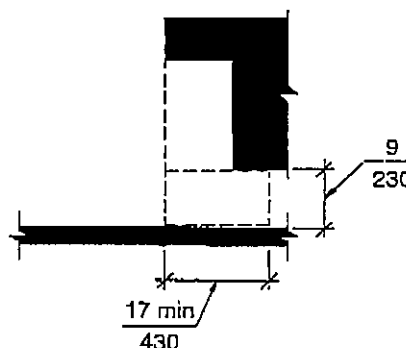


Fig. 306.2
Toe Clearance

306.3 Knee Clearance.

306.3.1 General. Space under an element between 9 inches (230 mm) and 27 inches (685 mm) above the floor or ground shall be knee clearance and shall comply with Section 306.3.

306.3.2 Maximum Depth. Knee clearance shall be permitted to extend 25 inches (635 mm) maximum under an element at 9 inches (230 mm) above the floor or ground.

306.3.3 Minimum Depth. Where knee clearance is required beneath an element as part of a clear floor or ground space, the knee clearance shall be 11 inches (280 mm) deep minimum at 9 inches (230 mm) above the floor or ground, and 8 inches (205 mm) deep minimum at 27 inches (685 mm) above the floor or ground.

306.3.4 Clearance Reduction. Between 9 inches (230 mm) and 27 inches (685 mm) above

Chapter 3. Building Blocks

ICC/ANSI A117.1-1998

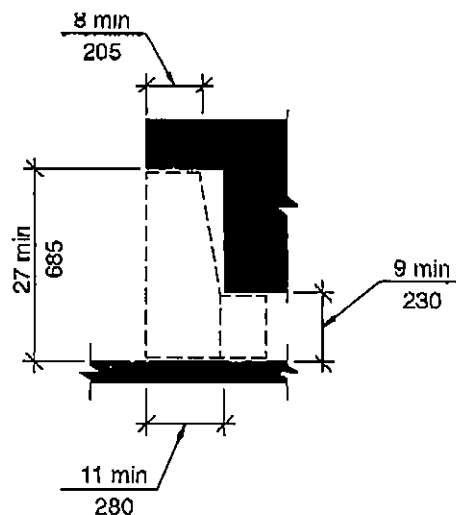


Fig. 306.3
Knee Clearance

the floor or ground, the knee clearance shall be permitted to be reduced at a rate of 1 inch (26 mm) for each 6 inches (150 mm) in height.

306.3.5 Width. Knee clearance shall be 30 inches (760 mm) wide minimum.

307 Protruding Objects

307.1 General. Protruding objects on circulation paths shall comply with Section 307.

307.2 Protrusion Limits. Objects with leading edges more than 27 inches (685 mm) and not more than 80 inches (2030 mm) above the floor or ground shall protrude 4 inches (100 mm) maximum horizontally into the circulation path.

EXCEPTION: Handrails serving stairs and ramps shall be permitted to protrude 4½ inches (115 mm) maximum.

307.3 Post-Mounted Objects. Objects on a single post or pylon shall be permitted to overhang 12 inches (305 mm) maximum where more than 27 inches (685 mm) and not more than 80 inches (2030 mm) above the floor or ground. Objects on multiple posts or pylons where the clear distance between the posts or pylons is greater than 12 inches (305 mm), shall have the lowest edge of such object either 27 inches (685 mm) maximum or 80 inches (2030 mm) minimum above the floor or ground surface.

EXCEPTION: Sloping portions of handrails serving stairs and ramps.

307.4 Reduced Vertical Clearance. Guardrails or other barriers shall be provided where vertical

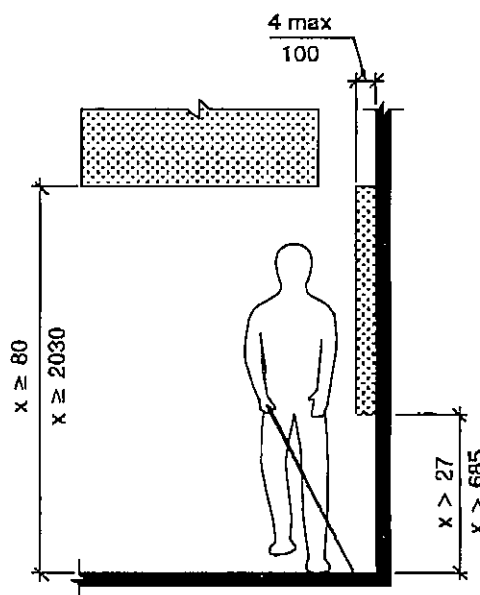
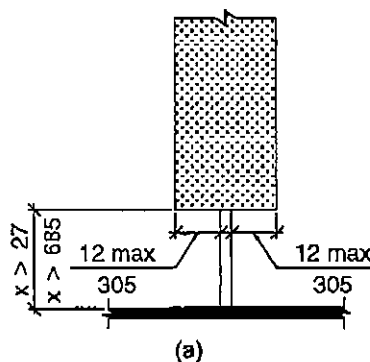
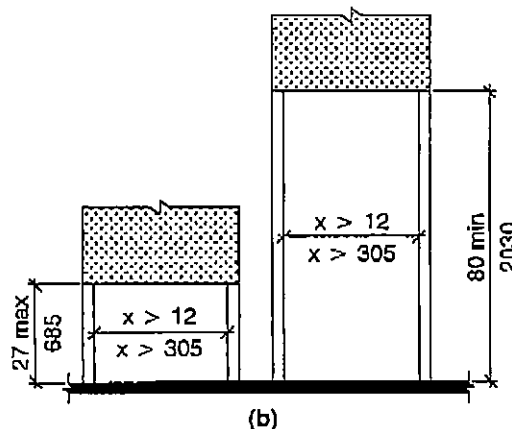


Fig. 307.2
Limits of Protruding Objects



(a)



(b)

Fig. 307.3
Post-Mounted Protruding Objects

AMERICAN NATIONAL STANDARD

Chapter 3. Building Blocks

clearance is less than 80 inches (2030 mm) high. Leading edge of such guardrail or barrier shall be 27 inches (685 mm) maximum above the floor or ground.

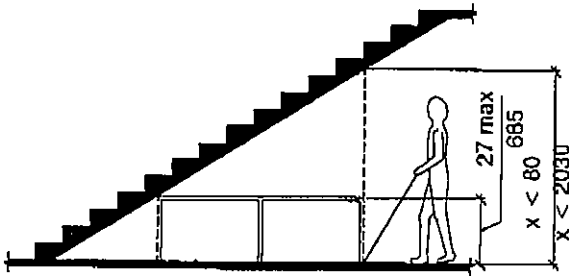


Fig. 307.4
Reduced Vertical Clearance

307.5 Required Clear Width. Protruding objects shall not reduce the clear width required for accessible routes.

308 Reach Ranges

308.1 General. Reach ranges shall comply with Section 308.

308.2 Forward Reach.

308.2.1 Unobstructed. Where a forward reach is unobstructed, the high forward reach shall be 48 inches (1220 mm) maximum and the low forward reach shall be 15 inches (380 mm) minimum above the floor or ground.

308.2.2 Obstructed High Reach. Where a high forward reach is over an obstruction, the

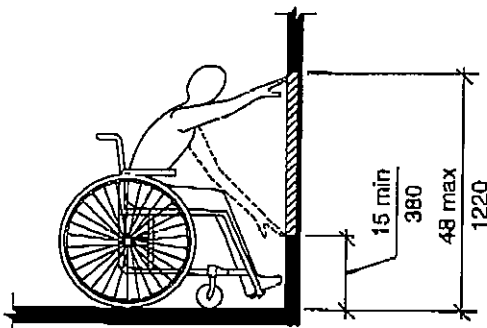


Fig. 308.2.1
Unobstructed Forward Reach

clear floor or ground space shall extend beneath the element for a distance not less than the required reach depth over the obstruction. The high forward reach shall be 48 inches (1220 mm) maximum where the reach depth is 20 inches (510 mm) maximum. Where the reach depth exceeds 20 inches (510 mm), the high forward reach shall be 44 inches (1120 mm) maximum and the reach depth shall be 25 inches (635 mm) maximum.

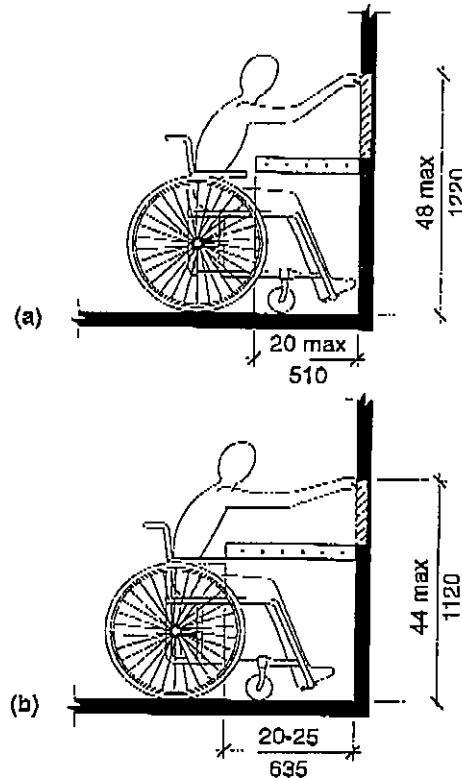


Fig. 308.2.2
Obstructed High Forward Reach

308.3 Side Reach.

308.3.1 Unobstructed. Where a clear floor or ground space allows a parallel approach to an element and the side reach is unobstructed, the high side reach shall be 48 inches (1220 mm) maximum and the low side reach shall be 15 inches (380 mm) minimum above the floor or ground.

EXCEPTION: Existing elements shall be permitted at 54 inches (1370 mm) maximum above the floor or ground.

Exhibit A 11

Page 14 of 17 Pages

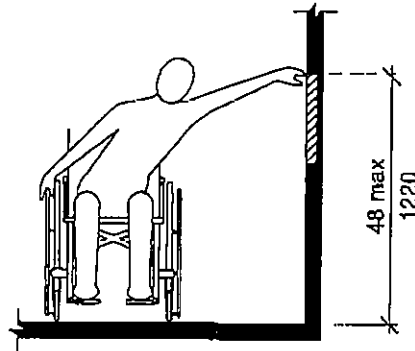


Fig. 308.3.1
Unobstructed Side Reach

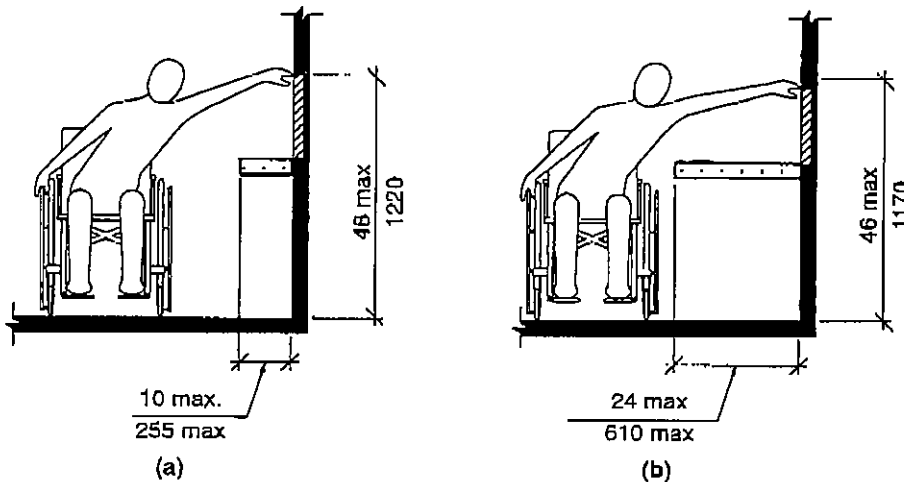


Fig. 308.3.2
Obstructed High Side Reach

308.3.2 Obstructed High Reach. Where a clear floor or ground space allows a parallel approach to an object and the high side reach is over an obstruction, the height of the obstruction shall be 34 inches (865 mm) maximum and the depth of the obstruction shall be 24 inches (610 mm) maximum. The high side reach shall be 48 inches (1220 mm) maximum for a reach depth of 10 inches (255 mm) maximum. Where the reach depth exceeds 10 inches (255 mm), the high side reach shall be 46 inches (1170 mm) maximum for a reach depth of 24 inches (610 mm) maximum.

309 Operable Parts

309.1 General. Operable parts required to be accessible shall comply with Section 309.

309.2 Clear Floor or Ground Space. A clear floor or ground space complying with Section 305 shall be provided.

309.3 Height. Operable parts shall be placed within one or more of the reach ranges specified in Section 308.

EXCEPTIONS:

1. Where the use of special equipment dictates otherwise.
2. Where electrical and communications systems receptacles are not normally intended for use by building occupants.

309.4 Operation. Operable parts shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 5 pounds (22.2 N) maximum.

Chapter 4. Accessible Routes

401 General

401.1 Scope. Accessible routes required by the scoping provisions adopted by the administrative authority shall comply with the applicable provisions of this chapter.

402 Accessible Routes

402.1 General. Accessible routes shall comply with Section 402.

402.2 Components. Accessible routes shall consist of one or more of the following components: Walking surfaces with a slope not steeper than 1:20, doorways, ramps, curb ramps, elevators, and wheelchair (platform) lifts. All components of an accessible route shall comply with the applicable portions of this standard.

403 Walking Surfaces

403.1 General. Walking surfaces that are a part of an accessible route shall comply with Section 403.

403.2 Floor or Ground Surface. Floor or ground surfaces shall comply with Section 302.

403.3 Slope. The running slope of walking surfaces shall not be steeper than 1:20. The cross slope of a walking surface shall not be steeper than 1:48.

403.4 Changes in Level. Changes in level shall comply with Section 303.

403.5 Clear Width. Clear width of an accessible route shall comply with Table 403.5.

Table 403.5—Clear Width of an Accessible Route

Segment Length	Minimum Segment Width
≤ 24 inches (610 mm)	32 inches (815 mm) ¹
> 24 inches (610 mm)	36 inches (915 mm)

¹Consecutive segments of 32 inches (815 mm) wide must be separated by a route segment 48 inches (1220 mm) long minimum and 36 inches (915 mm) wide minimum.

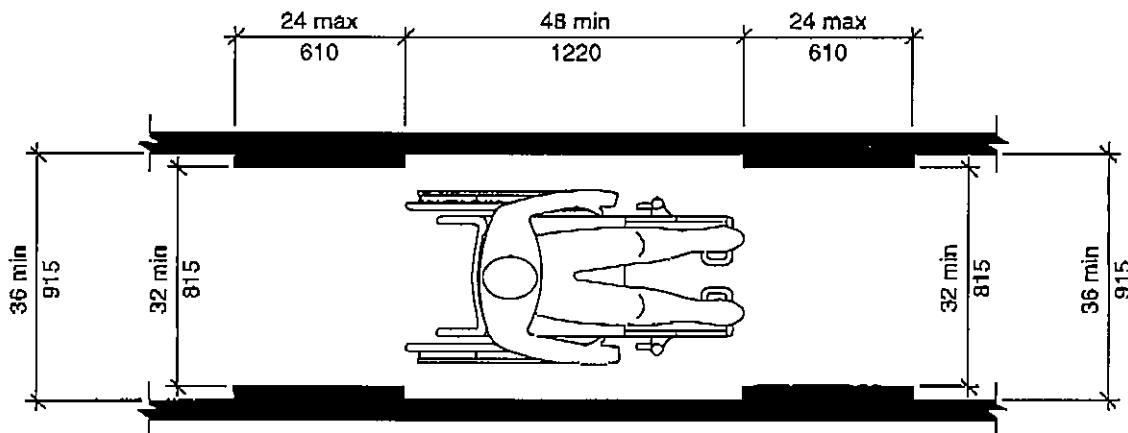


Fig. 403.5
Clear Width of an Accessible Route

Chapter 4. Accessible Routes

ICC/ANSI A117.1-1998

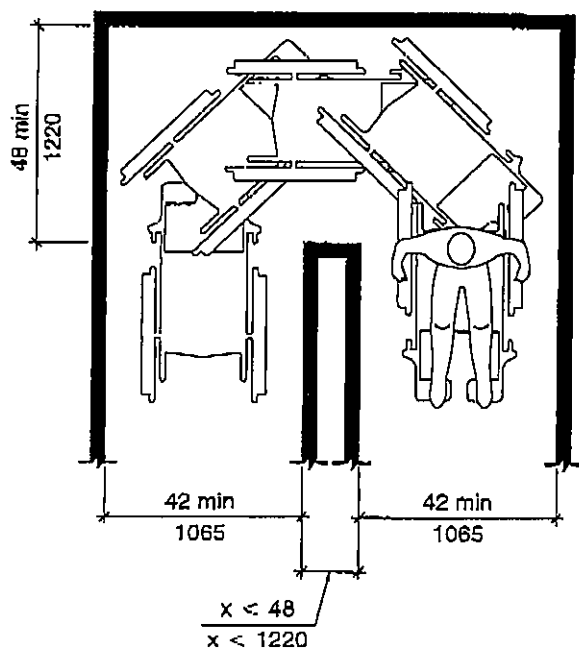


Fig. 403.5.1
Clear Width at Turn

403.5.1 Clear Width at Turn. Where an accessible route makes a 180 degree turn around an object which is less than 48 inches (1220 mm) wide, clear widths shall be 42 inches (1065 mm) minimum approaching the turn, 48 inches (1220 mm) minimum during the turn, and 42 inches (1065 mm) minimum leaving the turn.

403.5.2 Passing Space. An accessible route with a clear width less than 60 inches (1525 mm) shall provide passing spaces at intervals of 200 feet (61 m) maximum. These passing spaces shall be either a 60 inch (1525 mm) by 60 inch (1525 mm) minimum space, or an intersection of two walking surfaces which provide a T-shaped turning space complying with Section 304.

404 Doors and Doorways

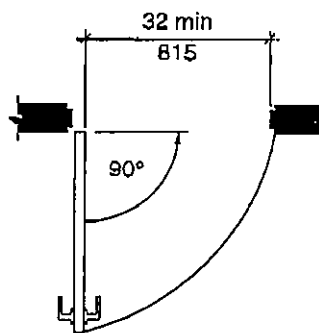
404.1 General. Doors and doorways that are part of an accessible route shall comply with Section 404.

404.2 Manual Doors. Manual doors and doorways, and manual gates, including ticket gates, shall comply with the requirements of Sections 404.2.1 through 404.2.11.

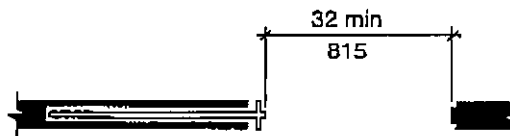
404.2.1 Revolving Doors and Turnstiles. Revolving doors or turnstiles shall not be part of an accessible route.

404.2.2 Double-Leaf Doorways. At least one of the active leaves of doorways with two independently operated leaves shall comply with Sections 404.2.3 and 404.2.4.

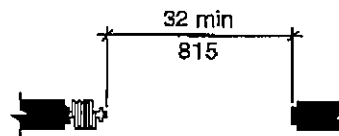
404.2.3 Clear Width. Doorways shall have a clear opening of 32 inches (815 mm) minimum. Clear opening of doorways with swinging doors shall be measured between the face of door and stop, with the door open 90 degrees. Openings more than 24 inches (610 mm) deep shall provide a clear opening of 36 inches (915 mm) minimum. There shall be no projections into the clear opening width lower than 34 inches (865 mm) above the floor or ground. Projections into the minimum clear opening width more than 34 inches (865 mm) and up to 80 inches (2020 mm) above the floor or ground are permitted but shall not exceed 4 inches (102 mm).



(a) Hinged Door



(b) Sliding Door



(c) Folding Door

Fig. 404.2.3
Clear Width of Doorways